



Installation Operation Maintenance

**Cooling only: CGAN 200 - 250 - 300 -
400 - 450 - 490 - 500 - 600 - 700 - 800 -
900 - 925**

**Reversible: CXAN 200 - 250 - 300 - 400
- 450 - 490 - 500 - 600 - 700 - 800 - 900
- 925**

AquaStream²®



CG-SVX01C-E4



General information

Foreword

These instructions are given as a guide to good practice in the installation, start-up, operation, and maintenance by the user, of Trane CGAN/CXAN 200-925 chillers. They do not contain full service procedures necessary for the continued successful operation of this equipment. The services of a qualified technician should be employed through the medium of a maintenance contract with a reputable service company. Read this manual thoroughly before unit start-up.

Units are assembled, pressure tested, dehydrated, charged and run tested before shipment.

Warnings and cautions

Warnings and Cautions appear at appropriate sections throughout this manual. Your personal safety and the proper operation of this machine require that you follow them carefully. The constructor assumes no liability for installations or servicing performed by unqualified personnel.

WARNING! : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION! : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices or for equipment or property-damage-only accidents.

Safety recommendations

To avoid death, injury, equipment or property damage, the following recommendations should be observed during maintenance and service visits:

1. The maximum allowable pressures for system leak testing on low and high pressure side are given in the chapter "Installation". Always provide a pressure regulator.
2. Disconnect the main power supply before any servicing on the unit.
3. Service work on the refrigeration system and the electrical system should be carried out only by qualified and experienced personnel.

General information

Reception

On arrival, inspect the unit before signing the delivery note.

Reception in France only:

In case of visible damage: The consignee (or the site representative) must specify any damage on the delivery note, legibly sign and date the delivery note, and the truck driver must countersign it.

The consignee (or the site representative) must notify Trane Epinal Operations - Claims team and send a copy of the delivery note.

The customer (or the site representative) should send a registered letter to the last carrier within 3 days of delivery.

Note: for deliveries in France, even concealed damage must be looked for at delivery and immediately treated as visible damage.

Reception in all countries except France:

In case of concealed damage: The consignee (or the site representative) must send a registered letter to the last carrier within 7 days of delivery, claiming for the described damage. A copy of this letter must be sent to Trane Epinal Operations - Claims team.

Warranty

Warranty is based on the general terms and conditions of the manufacturer. The warranty is void if the equipment is repaired or modified without the written approval of the manufacturer, if the operating limits are exceeded or if the control system or the electrical wiring is modified. Damage due to misuse, lack of maintenance or failure to comply with the manufacturer's instructions or recommendations is not covered by the warranty obligation. If the user does not conform to the rules of this manual, it may entail cancellation of warranty and liabilities by the manufacturer.

Refrigerant

The refrigerant provided by the manufacturer meets all the requirements of our units. When using recycled or reprocessed refrigerant, it is advisable to ensure its quality is equivalent to that of a new refrigerant. For this, it is necessary to have a precise analysis made by a specialized laboratory. If this condition is not respected, the manufacturer warranty could be cancelled.

General Data

Table 1 - CGAN Cooling only - Standard version - R407C

		CGAN 200	CGAN 250	CGAN 300	CGAN 400	CGAN 450	CGAN 490
Eurovent Performances (1)							
Net Cooling Capacity	(kW)	50.7	62.5	76.2	102.8	121.8	132.3
Total Power input in cooling	(kW)	19.1	24.4	28.8	38.7	43.6	50.5
Water pressure drop	(kPa)	29	33	38	46	43	44
Pressure available (5)	(kPa)	195	180	173	139	195	181
Main Power supply		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Units Amps							
Nominal (4)	(A)	47	57	69	89	102	111
Start-up Amps	(A)	148	203	215	236	327	336
Short circuit unit capacity	(kA)	10	10	10	10	10	10
Max supply cable size	(mm²)	16	35	35	95	95	95
Min supply cable size	(mm²)	10	16	16	50	50	50
Compressor							
Number		2	2	2	3	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Model		(10T+10T)	(10T+15T)	(15T+15T)	(15T+15T+10T)	(20T+25T)	(25T+25T)
Rated Amps (4)	(A)	19+19	19+28.5	28.5+28.5	28.5+28.5+19	38+47	47+47
Locked rotor Amps (2)	(A)	120	175	175	175	272	272
Motor RPM	(rpm)	2900	2900	2900	2900	2900	2900
Power factor		0.84	0.85	0.85	0.85	0.87	0.87
Sump Heater (2)	(W)	100	160	160	160	150	150
Evaporator							
Number		1	1	1	1	1	1
Type		Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Model		V200x38	V200x46	V200x54	V200x72	AC 120-108 EQ	AC 120-120 EQ
Water volume (total)	(l)	5.3	6.8	8.2	10.5	11.3	12.6
Antifreeze Heater	(W)	115	115	115	115	115	115
Unit Water Connections		Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7
Water Connections Diameter		2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Coil							
Type		Slit Fin	Slit Fin	Slit Fin	Slit Fin	Slit Fin	Slit Fin
Length	(mm)	2489	2489	2896	2896	2896	2896
Height	(mm)	1422	1422	1422	1626	1626	1626
Face Area (3)	(m²)	3.54	3.54	4.12	4.71	4.71	4.71
Rows		2	3	3	3	4	4
Fins per foot	(fpf)	204	180	180	180	168	168
Fan							
Type		Propeller	Propeller	Propeller	Propeller	Propeller	Propeller
Number		2	2	3	3	3	3
Diameter	(mm)	710	710	710	800	800	800
Drive type		Direct drive	Direct drive	Direct drive	Direct drive	Direct drive	Direct drive
Air flow	(m³/h)	20200	19100	26300	37300	37100	37100
Number of motors		2	2	3	3	3	3
Motor HP (2)	(kW)	0.57	0.57	0.57	1.05	1.05	1.05
Rated Amps (2)	(A)	1.5	1.5	1.5	2.4	2.4	2.4
Motor RPM	(rpm)	700	700	700	680	680	680
Dimensions							
Height (6)	(mm)	1897	1897	1897	2074	2074	2074
Length	(mm)	2800	2800	3200	3200	3200	3200
Width	(mm)	1100	1100	1100	1100	1100	1100
Operating Weight	(kg)	748	842	968	1143	1267	1292
Shipping Weight	(kg)	743	834	954	1124	1260	1284
System Data							
Number of refrigerant circuits		1	1	1	1	1	1
Capacity steps		2	2	2	2	2	2
Minimum capacity	(%)	50	40/60	50	37/63	37/63	37/63
Refrigerant Charge (3)							
Circuit A	(kg)	13	18	21	24	28	28
Circuit B	(kg)	-	-	-	-	-	-

(1) at Eurovent Conditions (Evap 12°C/7°C - Air. 35°C)

(2) per motor

(3) per circuit

(4) Max rated conditions.

(5) Dual Pump Option

(6) For units with HESP option, contact your local sales office

General Data

Table 1 - cont

		CGAN 500	CGAN 600	CGAN 700	CGAN 800	CGAN 900	CGAN 925
Eurovent Performances (1)							
Net Cooling Capacity	(kW)	128.9	157.1	182.8	214.2	241.3	267.0
Total Power input in cooling	(kW)	49.1	57.9	68.4	77.9	88.3	102.4
Water pressure drop	(kPa)	30	36	30	35	35	41
Pressure available (5)	(kPa)	206	185	196	174	137	124
Main Power supply		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Units Amps							
Nominal (4)	(A)	113	136	153	188	208	225
Start-up Amps	(A)	259	282	300	334	354	450
Short circuit unit capacity	(kA)	10	10	10	10	10	10
Max supply cable size	(mm ²)	95	95	150	150	150	150
Min supply cable size	(mm ²)	50	50	95	95	95	95
Compressor							
Number		4	4	6	6	6	4
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Model		(10T+15T)	(15T+15T)	(10T+10T+15T)	(15T+15T+10T)	(15T+15T+15T)	(25T+25T)
Rated Amps (4)	(A)	2x(19+28.5)	2x(28.5+28.5)	2x(19+19+28.5)	2x(28.5+28.5+19)	2x(28.5+28.5+28.5)	2x(47+47)
Locked rotor Amps (2)	(A)	175	175	175	175	175	272
Motor RPM	(rpm)	2900	2900	2900	2900	2900	2900
Power factor		0.85	0.85	0.85	0.85	0.85	0.87
Sump Heater (2)	(W)	160	160	160	160	160	150
Evaporator							
Number		1	1	1	1	1	1
Type		Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Model		DV58-82	DV58-94	DV58x122	DV58x138	DV58x170	DV58x170
Water volume (total)	(l)	17.2	19.8	25.6	29.0	35.7	35.7
Antifreeze Heater	(W)	180	180	180	180	180	180
Unit Water Connections		Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7	Male ISO R7
Water Connections Diameter		2 1/2"	2 1/2"	3"	3"	3"	3"
Coil							
Type		Slit Fin	Slit Fin	Slit Fin	Slit Fin	Slit Fin	Slit Fin
Length	(mm)	2489	2896	2896	2896	2896	2896
Height	(mm)	1422	1422	1626	1626	1626	1626
Face Area (3)	(m ²)	3.54	4.12	4.71	4.71	4.71	4.71
Rows		3	3	3	3	4	4
Fins per foot	(fpf)	180	180	180	180	180	168
Fan							
Type		Propeller	Propeller	Propeller	Propeller	Propeller	Propeller
Number		4	6	6	6	6	6
Diameter	(mm)	710	710	710	800	800	800
Drive type		Direct drive	Direct drive	Direct drive	Direct drive	Direct drive	Direct drive
Air flow	(m ³ /h)	38300	52700	55400	86300	83000	79300
Number of motors		4	6	6	6	6	6
Motor HP (2)	(kW)	0.57	0.57	0.57	1.4	1.4	1.4
Rated Amps (2)	(A)	1.5	1.5	1.5	4	4	4
Motor RPM	(rpm)	700	700	700	680	680	680
Dimensions							
Height (6)	(mm)	1897	1897	2100	2100	2100	2100
Length	(mm)	3400	3400	3400	3400	3400	3400
Width	(mm)	2300	2300	2300	2300	2300	2300
Operating Weight	(kg)	1623	1818	2087	2245	2423	2456
Shipping Weight	(kg)	1588	1778	2030	2181	2344	2377
System Data							
Number of refrigerant circuits		2	2	2	2	2	2
Capacity steps		4	4	4	4	4	4
Minimum capacity	(%)	20/30	25	22/29	19/32	17/33	17/33
Refrigerant Charge (3)							
Circuit A	(kg)	19	22	27	27	34	31
Circuit B	(kg)	19	22	27	27	34	31

(1) at Eurovent Conditions (Evap 12°C/7°C - Air. 35°C)

(2) per motor

(3) per circuit

(4) Max rated conditions.

(5) Dual Pump Option

(6) For units with HESP option, contact your local sales office

General Data

Table 5 - Hydraulic module and buffer tank

		CGAN CXAN 200	CGAN CXAN 250	CGAN CXAN 300	CGAN CXAN 400	CGAN CXAN 450	CGAN CXAN 490	CGAN CXAN 500	CGAN CXAN 600	CGAN CXAN 700	CGAN CXAN 800	CGAN CXAN 900	CGAN CXAN 925
Motor (2)	(kW)	2.2	2.2	2.2	2.2	4.0	2.2	4.0	4.0	4.0	4.0	5.5	5.5
Rated Amps (2)	(A)	4.9	4.9	4.9	4.9	4.9	7.5	7.5	7.5	7.5	7.5	11.1	11.1
Motor RPM	(rpm)							2900					
Water strainer Ø		2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	3"
Expansion tank volume	(L)	25	25	25	25	25	25	35	35	35	35	35	35
User volume expansion capacity (1)	(L)	1000	1000	1000	1000	1000	1 000	1400	1400	1400	1400	1400	1400
Antifreeze heater	(W)							150					
Piping material								Steel					
Hydraulic Module Weight	(kg)	103	103	108	108	108	108	110	110	114	114	189	189
Water tank volume (Option)	(L)	370	370	410	410	410	410	570	570	570	570	570	570
Water tank additional shipping height	(mm)							400					
Water tank additional shipping weight	(kg)	396	396	437	436	436	436	644	644	644	644	644	644

(1) Hydrostatic pressure 3 bar at 45°C with -12°C mini

(2) Dual Pump Option